



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0019; Project Identifier MCAI-2020-01388-T; Amendment 39-21649; AD 2021-15-02]

RIN 2120-AA64

Airworthiness Directives; Airbus Canada Limited Partnership (Type Certificate Previously Held by C Series Aircraft Limited Partnership (CSALP); Bombardier, Inc.) Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Airbus Canada Limited Partnership Model BD-500-1A10 and BD-500-1A11 airplanes. This AD was prompted by reports of deficiencies in the primary flight control computer (PFCC) software and the remote electronics unit (REU) software. This AD requires installation of a software update to correct deficiencies in the PFCC and REU software, as specified in a Transport Canada Civil Aviation (TCCA) AD, which is incorporated by reference. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For TCCA material incorporated by reference (IBR) in this AD, contact TCCA, Transport Canada National Aircraft Certification, 159 Cleopatra Drive, Nepean, Ontario K1A 0N5, Canada; telephone 888-663-3639; email AD-CN@tc.gc.ca; Internet <https://tc.canada.ca/en/aviation>. You may view this IBR material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0019.

For the Airbus Canada material identified in this AD that is not incorporated by reference, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-5000; fax 514-855-7401; email thd.crj@aero.bombardier.com; Internet <https://www.bombardier.com>.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0019; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Thomas Niczky, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7347; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

TCCA, which is the aviation authority for Canada, has issued TCCA AD CF-2020-36, dated October 8, 2020 (TCCA AD CF-2020-36) (also referred to as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for certain Airbus Canada Limited Partnership Model BD-500-1A10 and BD-500-1A11 airplanes.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Airbus Canada Limited Partnership Model BD-500-1A10 and BD-500-1A11 airplanes. The NPRM published in the *Federal Register* on February 24, 2021 (86 FR 11178). The NPRM was prompted by reports of deficiencies in the PFCC and REU software. The NPRM proposed to require installation of a software update to correct deficiencies in the PFCC and REU software, as specified in TCCA AD CF-2020-36.

The FAA is issuing this AD to address software deficiencies that, if not corrected, could impact flight control functions, which could prevent continued safe flight and landing. See the MCAI for additional background information.

Comments

The FAA gave the public the opportunity to participate in developing this final rule. The following presents the comments received on the NPRM and the FAA's response to each comment. Air Line Pilots Association, International (ALPA) expressed support for the NPRM.

Request to Clarify Software Installation Requirements

Delta Air Lines (Delta) requested that paragraphs (h)(3) and (4) be added to the proposed AD to clarify that it is acceptable to use a different method of upgrading the REU and PFCC with the specified software, using Airbus Canada Service Bulletin (SB) BD500-270013, Issue 001, dated July 17, 2020, only as a reference. Delta explained that

it has a different policy for installing PFCC software that requires the use of a Portable Maintenance Access Terminal (PMAT), model PMAT2000, instead of a USB device.

The FAA partially agrees with the proposed changes. The FAA agrees to clarify that the PMAT method is permitted, but the FAA will not require the use of a specific model of PMAT. Also, using the service information as a reference must be specified in a note rather than in the paragraph itself. Therefore, a single paragraph (h)(3) has been added to this AD to provide this clarification, and a note has been added regarding the use of Airbus Canada Service Bulletin (SB) BD500-270013, Issue 001, dated July 17, 2020, as a reference.

Conclusion

The FAA reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule with the changes described previously and minor editorial changes. The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

The FAA also determined that these changes will not increase the economic burden on any operator or increase the scope of this final rule.

Related Service Information under 1 CFR Part 51

TCCA AD CF-2020-36 describes procedures for installing updated PFCC and REU software; this installation includes prerequisites (installing certain database versions and software) that must be met prior to the installation. This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects 38 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Up to 18 work-hours X \$85 per hour = Up to \$1,530	Up to \$21,100*	Up to \$22,630	Up to \$859,940

*Cost if operators elect to have manufacturer load software in REUs.

According to the manufacturer, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators. The FAA does not control warranty coverage for affected operators. As a result, the FAA has included all known costs in the cost estimate.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2021-15-02 Airbus Canada Limited Partnership (Type Certificate Previously Held by C Series Aircraft Limited Partnership (CSALP); Bombardier, Inc.): Amendment 39-21649; Docket No. FAA-2021-0019; Project Identifier MCAI-2020-01388-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Airbus Canada Limited Partnership Model BD-500-1A10 and BD-500-1A11 airplanes, certificated in any category, as identified in Transport Canada Civil Aviation (TCCA) AD CF-2020-36, dated October 8, 2020 (TCCA AD CF-2020-36).

(d) Subject

Air Transport Association (ATA) of America Code 27, Flight control system.

(e) Reason

This AD was prompted by reports of deficiencies in the primary flight control computer (PFCC) software and remote electronics unit (REU) software. The FAA is issuing this AD to address software deficiencies that, if not corrected, could impact flight control functions, which could prevent continued safe flight and landing.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, TCCA AD CF-2020-36. The prerequisites specified in the service information referenced in TCCA AD CF-2020-36 must be met prior to accomplishing the required actions.

(h) Exception and Clarification of TCCA AD CF-2020-36

(1) Where TCCA AD CF-2020-36 refers to its effective date, this AD requires using the effective date of this AD.

(2) The compliance time for the actions required by paragraph (g) of this AD is the earliest of the times specified in paragraphs (h)(2)(i) through (iii) of this AD.

- (i) Prior to the accumulation of 12,000 total flight hours.
- (ii) Within 56 months after the effective date of this AD.
- (iii) Within 9,350 flight hours after the effective date of this AD.

(3) Where TCCA AD CF-2020-36 specifies installing software updates on the PFCCs using a USB-type device, this AD also allows the use of a portable maintenance access terminal (PMAT)-type device.

Note 1 to paragraph (h)(3): When using a PMAT-type device, guidance for upgrading the software can be found in Airbus Canada Service Bulletin (SB) BD500-270013, Issue 001, dated July 17, 2020.

(i) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (j)(1) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or TCCA; or Airbus Canada's TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(j) Related Information

(1) For more information about this AD, contact Thomas Niczky, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7347; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

(2) For Airbus Canada service information identified in this AD, which is not incorporated by reference, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-5000; fax 514-855-7401; email thd.crj@aero.bombardier.com; Internet <https://www.bombardier.com>. This Airbus Canada service information is available also at the address specified in paragraph (k)(4) of this AD.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Transport Canada Civil Aviation (TCCA) AD CF-2020-36, dated October 8, 2020.

(ii) [Reserved]

(3) For TCCA AD CF-2020-36, contact Transport Canada National Aircraft Certification, 159 Cleopatra Drive, Nepean, Ontario K1A 0N5, Canada; telephone 888-663-3639; email AD-CN@tc.gc.ca; Internet <https://tc.canada.ca/en/aviation>.

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. This material may be

found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0019.

(5) You may view this material that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fr.inspection@nara.gov, or go to:

<https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on July 8, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2021-16563 Filed: 8/4/2021 8:45 am; Publication Date: 8/5/2021]